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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,610	07/01/2003	Kevin J. Shinnars	P03384US	1449

36122 7590 08/25/2004

DUFT SETTER OLLILA & BORNSSEN LLC  
2060 BROADWAY  
SUITE 300  
BOULDER, CO 80302

EXAMINER

MAMMEN, NATHAN SCOTT

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/611,610

Applicant(s)

SHINNERS ET AL.

Examiner

Nathan S Mammen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 117-127 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 117-127 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 117 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,272,819 to Wendte et al.

The Wendte '819 patent discloses a yield monitor having a volume increment accumulation device (200) for generating a volume increment accumulation signal. Col. 11, lines 11-14. A computer receives the volume increment accumulation signal and generates a yield amount based on the signal and a forage processing machinery groundspeed. Col. 9, lines 45-65. The yield amount is also based on forage processing machinery intake parameters other than ground speed. Col. 6, lines 40-44.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 117, 119 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,913,901 to Bottinger et al. in view of U.S. Patent No. 5,480,354 to Sadjadi and U.S. Patent No. 6,525,276 to Vellidus et al.

The Bottinger '901 patent discloses a square baler comprising a bale mass measuring device. A computer receives product mass signals and generates a yield amount based on the signal. Col. 4, lines 44-52. What the Bottinger '901 patent does not disclose is that the computer also generates a yield amount based on a volume increment measurement and machinery groundspeed.

The Sadjadi '354 patent teaches that it is known in the art to provide a yield monitor which determines yield based on volume measurements. Col. 2, line 2-3. The Sadjadi '354 patent further teaches that these volume measurements are transmitted to a computer (14) and combined with signals from a global positioning sensor (30) to determine yield. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the baler of the Bottinger '901 patent with the volume increment measuring device as taught by the Sadjadi '354 patent, in order to provide an on-the-go yield measurement. See Sadjadi, col. 4, line 7-14.

The Bottinger '901 patent does not disclose that the yield amount is based on machinery groundspeed. While machinery groundspeed measurement appears to be implicit in the Sadjadi system (likely obtained from GPS measurements), the Sadjadi '354 patent also fails to mention using machinery groundspeed measurements. However, the Vellidus '276 patent teaches that it is known in the art to generate a yield amount by taking into account volume and groundspeed. Col. 9, lines 45-65. It would have been obvious to one having ordinary skill in the art at the time

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the invention was made to modify the square baler yield monitor of the Bottinger '901 patent to take into account machinery groundspeed as taught by the Vellidus '276 patent, in order to provide an improved yield monitor that can display instantaneous results as the machine is moved through the field.

Regarding claims 122-126: The yield monitor of the Bottinger '901 patent measures a force applied to a baler compression plunger. Col. 3, lines 19-44.

5. Claims 120 and 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,913,901 to Bottinger et al. in view of U.S. Patent No. 5,480,354 to Sadjadi and U.S. Patent No. 6,525,276 to Vellidus et al., as applied to claim 117 above, and further in view of U.S. Patent No. 5,855,166 to McPherson.

The combination of the Bottinger '901 and Vellidus '276 patents teaches the claimed invention, as stated in paragraph 8 above, except for the yield monitor having a measuring wheel. The McPherson '166 patent teaches that it is known in the art to provide a measuring wheel (65) for a square baler. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the combination of the Bottinger '901 and Vellidus '276 patents with the measuring wheel as taught by the McPherson '166 patent, in order to provide a means for measuring the side of the hay bale.

6. Claim 127 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,272,819 to Wendte et al in view of U.S. Patent No. 4,487,002 to Kruse et al.

The Wendte '819 patent discloses the claimed invention, as stated in paragraph 2 above, except for the yield monitor generating a groundspeed control signal. The Kruse '002 patent teaches that it is known in the harvesting art to provide a yield monitor that senses the volume

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increment measurement (i.e. crop load) and operates to control the harvester speed. It would have been obvious to one having ordinary skill in the art to provide the yield monitor of the Wendte '819 patent with the speed control feature of the Kruse '002 patent, in order to provide a means for controlling the machine to operate at the optimum speed for the crop being harvested. Kruse, col. 6, line 60- col. 6, line 3.

### *Response to Arguments*

7. Applicant's arguments filed 5/28/04 have been fully considered but they are not persuasive.

Applicant's argument that the Wendte '819 patent does not disclose a volume increment accumulation measuring device is incorrect. Wendte states that "the **electrical signal** generated by cell 208, which is read by monitor circuit 102, **depends upon the quantity of sugar cane billets** being discharged into the external storage device. The relationship between the **quantity of billets** and the sensed signal read by circuit 102 can be empirically determined using appropriate curve-fitting algorithms." Col. 11, lines 11-17 (emphasis added). Thus, as the Wendte patent explicitly states, the Wendte patent measures the volume accumulated. Though Wendte uses a correlation step of converting a load cell signal into a volume measurement, this extra step does not change the fact that what is being measured is volume.

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

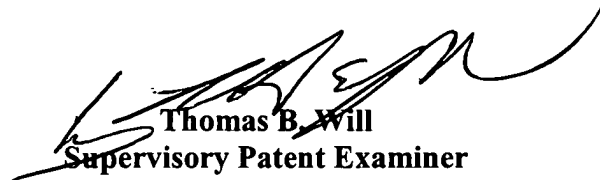
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Mammen whose telephone number is (703) 306-5959. The examiner can normally be reached Monday through Thursday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at (703) 308-3870. The fax number for this Group is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-1113.

  
**Thomas B. Will**  
**Supervisory Patent Examiner**  
**Group 3600**

**NSM**  
**8/14/04**

**Nathan S. Mammen**